



RF EXPOSURE REPORT

REPORT NO.: SA130218E07

MODEL NO.: Surf SOHO, Surf SOHO LTE, MAX,
Surf Pro, AP Pro, Device Connector,
Express, Balance, Pismo 734, CarFi,
Flex AP

FCC ID: U8G-P1740

RECEIVED: Feb. 18, 2013

TESTED: Mar. 03 to May 27, 2013

ISSUED: May 31, 2013

APPLICANT: Pismo Labs Technology Limited

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ISSUED BY: Bureau Veritas Consumer Products Services
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RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
SA130218E07	Original release	May 31, 2013



1. CERTIFICATION

PRODUCT: Pepwave / Peplink / Pismo Wireless Product

BRAND NAME: Pepwave / Peplink / Pismo

MODEL NO.: Surf SOHO, Surf SOHO LTE, MAX, Surf Pro, AP Pro,
Device Connector, Express, Balance, Pismo 734,
CarFi, Flex AP

TEST SAMPLE: ENGINEERING SAMPLE

APPLICANT: Pismo Labs Technology Limited

TESTED DATE: Mar. 03 to May 27, 2013

STANDARDS: FCC Part 2 (Section 2.1091)
FCC OET Bulletin 65, Supplement C (01-01)
IEEE C95.1

The above equipment (Model: Surf SOHO) has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions specified in this report.

PREPARED BY :  , **DATE:** May 31, 2013
(Elsie Hsu, Specialist)

APPROVED BY :  , **DATE:** May 31, 2013
(May Chen, Manager)

2. RF EXPOSURE LIMIT

LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

FREQUENCY RANGE (MHz)	ELECTRIC FIELD STRENGTH (V/m)	MAGNETIC FIELD STRENGTH (A/m)	POWER DENSITY (mW/cm ²)	AVERAGE TIME (minutes)
LIMITS FOR GENERAL POPULATION / UNCONTROLLED EXPOSURE				
300-1500	F/1500	30
1500-100,000	1.0	30

F = Frequency in MHz

3. MPE CALCULATION FORMULA

$$P_d = (P_{out} * G) / (4 * \pi * r^2)$$

where

P_d = power density in mW/cm²

P_{out} = output power to antenna in mW

G = gain of antenna in linear scale

π = 3.1416

r = distance between observation point and center of the radiator in cm

4. CLASSIFICATION

This product could be applied with one USB Cellular Modem, and the safe distance is 34 cm for collocated radio.

5. CALCULATION RESULT OF MAXIMUM CONDUCTED POWER

For WLAN:

For 15.247(2.4GHz):

FREQUENCY (MHz)	MAX POWER (mW)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/ cm ²)	LIMIT (mW/cm ²)
2412-2462	951.796	0.83	34	0.07932	1

For 15.247(5GHz):

FREQUENCY (MHz)	MAX POWER (mW)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/ cm ²)	LIMIT (mW/cm ²)
5745 ~ 5825	98.407	3.49	34	0.01513	1

For 15.407(5GHz):

FREQUENCY (MHz)	MAX POWER (mW)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/ cm ²)	LIMIT (mW/cm ²)
5180 ~ 5240	47.874	3.49	34	0.00736	1

For USB Cellular Modem:

DEVICE	MAX EIRP (mW)	MAX EIRP (dBm)	DISTANCE (cm)	POWER DENSITY (mW/ cm ²)	LIMIT (mW/cm ²)
USB Cellular Modem	7000	38.45	34	0.48187	0.55

This product can operate with a plug-in 3G device which has maximum of 7W ERP(7000mW EIRP) output power.

CONCLUSION:

Both of the WLAN and plug-in device (USB Cellular Modem 3G) can transmit simultaneously, the formula of calculated the MPE is:

$$CPD_1 / LPD_1 + CPD_2 / LPD_2 + \dots \text{etc.} < 1$$

CPD = Calculation power density

LPD = Limit of power density

For WLAN (2.4GHz):

Therefore, the worst-case situation is $0.07932 / 1 + 0.48187 / 0.55 = 0.955$, which is less than "1". This confirmed that the device comply with FCC 1.1310 MPE limit.

For WLAN (5GHz):

Therefore, the worst-case situation is $0.01513 / 1 + 0.48187 / 0.55 = 0.891$, which is less than "1". This confirmed that the device comply with FCC 1.1310 MPE limit.

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